

Product Type	Note	Application	Primary Mode of Exposure	Secondary Mode of Exposure	Typical 1,4-Dioxane ppm in Concentrate	Highest Recommended Dilution Factor	Typical 1,4-Dioxane ppm in Use-Solution	Applications per 8-hour shift	Total Volume of PRODUCT Use-Solution at high dose per 8-hour shift (mL)	Typical Application Water Temp (F)	Potential Exposure Time to PRODUCT per 8-hour shift (hours)
Manual / Pot and Pan Detergent- Quick Service Restaurant	1	Sink / Immersion	dermal	Limited inhalation	4	0.0015000	0.006	6	150	100	3
Manual / Pot and Pan Detergent - Full Service Restaurant	1	Sink / Immersion	dermal	Limited inhalation	4	0.0015000	0.006	3	90	100	1.5
Manual / Pot and Pan Detergent - Food Retail	1	Sink / Immersion	dermal	Limited inhalation	4	0.0015000	0.006	2	60	70	1
Manual / Pot and Pan - Power Wash Application	2	Sink / Immersion	dermal	Inhalation	2	0.0015000	0.003	2	49	100	1
Machine Warewash	3										
Laundry Detergent - Limited Service Lodging	4	Closed-Loop	inhalation	None	1	0.00414	0.00414	4	2490	140	4
Laundry Detergent - Full Service Lodging	4	Closed-Loop	inhalation	None	1	0.00414	0.00414	4	2400	140	4
Laundry Detergent - Industrial Laundry	5	Closed-Loop	inhalation	None	2	0.0055	0.011	8	2850	140	8
Laundry Manual Prespotter	6	Spray	inhalation	Limited Dermal	1	1	1	12	30	70	1
Hand Soap - Food Service Operation	7	Hand / Immerse	dermal	Limited inhalation	0.4	1	0.4	8	8	70	0.044
Hand Soap - Facility Operation	7	Hand / Immerse	dermal	Limited inhalation	0.4	1	0.4	4	4	35	0.022
Specialty Manual Cleaner - Commercial Operation	8	Spray	inhalation	Limited Dermal	2	0.0625	0.125	4	250	70	0.133
Floor Finish or Cleaner - Commercial Operation	9	Mop	inhalation	Limited Dermal	1	0.025	0.025	5	2000	100	0.8333

Notes

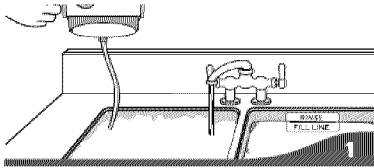
- Manual pot and pan wash frequency is typically after meal preparation and serving rushes throughout operation hours depending on the type of operation
- Yash duration can be 10mins-45mins at a time per observations surveys. Estimate 30 minutes
- For some equipment the Standard Operating Procedures states that ware items used for preparing and serving food should be cleaned every four hours when in use (this is dictated by Food Code).
- Food code says minimum wash temp should be 119F unless another temp is stated by the manufacturer on the label.
- Manual Pot and Pan Power Wash applications utilize a water agitation/recirculation to wash ware in a large volume sink. The dermal exposure may be reduced as this process is semi-automatic
- Machine Warewash (automatic dishmachine) applications are close-loop dispensing systems.
- Typical Machine Warewash Detergent and Sanitizer chemical products would not contain 1,4-Dioxane. Rinse Additives may contain trace levels, but are injected at 1 mL or less per wash cycle.
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- FDA / NSF has oversight of Rinse Additive applications as indirect food additives
- 1,4-Dioxane levels of commercial rinse additives (as sold) will be < 1 ppm.
- Typical commercial laundry machines operate at high and low water levels during wash cycle steps. Detergent steps are normally at the low water level. A 100-lb. laundry machine at the low water level will have approximately 17 gallons of water. Therefore, 9 oz / 17 gallons = 0.00414 dilution factor.
- Dermal exposure for laundry detergent application is NOT expected. Normal commercial and industrial laundry wash cycles consist of various wash, bleach, and rinse steps that are designed to end with less than 21-ppm residual alkalinity in the rinse water at the final rinse; residual product is expected at the end of a wash cycle.
- Laundry product is automatically dispensed into a laundry machine from a closed-loop dispensing system.
- The use residue concentration used for the inhalation exposure calculation was derived from the highest recommended concentration of 9 oz detergent / 100 lbs. of laundry.
- Normal commercial and industrial laundry wash cycles consist of various wash, bleach, and rinse steps that are designed to end with less than 21-ppm residual alkalinity in the rinse water at the final rinse.
- No residual product is expected to remain on linen at the end of a wash cycle.
- Effluent from a commercial or industrial laundry machine goes directly to sewer system or an on-site treatment system.
- Any exposure would be through possible aerosolization in the wash vehicle / wash tunnel and effluent discharge that would be vented during the wash cycle.
- Industrial textile washing utilizes a continuous batch process with several stages of rinses and chemical treatment over a larger size of operation.
- Detergent dosing recommendations vary but for industrial, will use 12 oz / CWT
- Laundry Prespotter products are usually directly added to a soak tub or solution. They can be sprayed directly onto linen as well. The expected routes of exposure are inhalation and dermal. Estimate 2.5 mL per spray.
- Typical dispense volume for manual or touch-free hand soap dispensers is 1 mL.
- There are various specialty products that may contain 1,4-Dioxane. These include degreasers, multi-surface cleaners, air fresheners and carpet cleaners/spotters.
- Application estimates are generalized for this summary.
- Floor cleaner and/or resilient floor finish products may contain 1,4-Dioxane.
- Applications may vary.
- Floor cleaners may be applied manually by mop and mop bucket or through auto-scrubber applications.
- Dermal and inhalation routes of exposure would vary depending on application method and temperature.
- Auto-scrubbers typically have a HEPA filter on the exhaust system and chemical contact is minimized through closed-loop chemical dispensing and draining.

Possible Factors for Exposure Estimates

- | | |
|----------------|---|
| W | Volume of PRODUCT used per application |
| N | Number of applications per day |
| C _g | Concentration of 1,4-Dioxane in PRODUCT or USE-SOLUTION |
| T | Hours of PRODUCT use per application |
| E | Evaporation Rate of 1,4-Dioxane from PRODUCT |
| S | Area of surface in Application Room |
| H | Height of Ceiling in Application Room |
| BW | Average human weight of user |
| F | Fraction of PRODUCT remaining on skin |
| A | Absorption rate on skin |
| I | Inhalation rate |

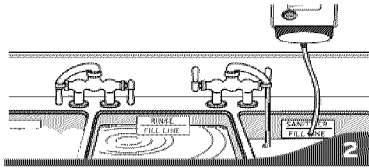
1,4-Dioxane Levels in Commercial and Consumer Products

Product Type	Independent Lab	Company D Initial	Company D Re-Test (+30 Days)
with AES	1,4-Dioxane ppm	1,4-Dioxane ppm	1,4-Dioxane ppm
Hand / Manual Dish 30%	3.6	4.2	4.2
Consumer Laundry 15%	1	0.9	1.3
Hand / Manual Dish 15%	1.9	2.2	2.3
Consumer Laundry 30%	2.7	2.7	2.7
I&I Laundry 50%	0.94	1.2	1.3



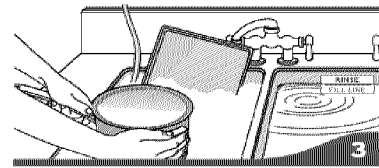
Push button on manual pot and pan dispenser to dispense detergent. Fill wash sink to fill line with hot water.

Presione el botón en el dispensador manual para ollas y sartenes para dispensar detergente. Llene el fregadero de lavado con agua caliente hasta la línea de llenado.



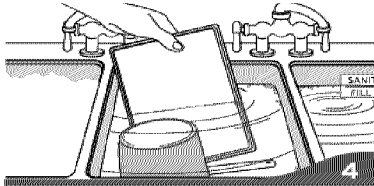
Fill rinse sink with hot water. Fill sanitizer sink with an EPA-registered sanitizer solution. Carefully read and follow the directions for use on the product label.

Llene el fregadero de enjuague con agua caliente. Llene el fregadero para desinfectar con una solución desinfectante registrada por el EPA. Lea y siga cuidadosamente las instrucciones de uso en la etiqueta del producto.



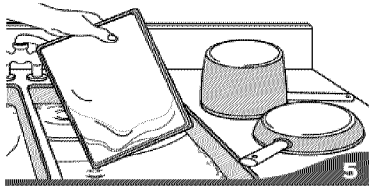
Pre-scrape pots and pans. Soak for at least 5-10 minutes depending on soil level. Scrub all surfaces and allow excess water to run back into wash sink.

Raspe primero las ollas y los sartenes. Remoje durante 5 a 10 minutos dependiendo del nivel de la suciedad. Frieque todas las superficies y permita que el exceso de agua escurra de nuevo al fregadero de lavado.



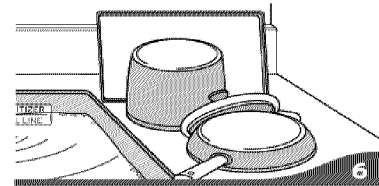
Submerge in hot water rinse and allow excess water to run back into rinse sink.

Sumerja en agua caliente de enjuague y permita que el exceso de agua escurra de nuevo al fregadero de enjuague.



Submerge in sanitizer sink for one minute or as specified by product label and/or local guidelines.

Sumerja en el fregadero para desinfectar durante un minuto o durante el tiempo especificado en el rótulo del producto y/o indicado por las directrices locales.



Turn upside down to air dry. Do not wipe dry.

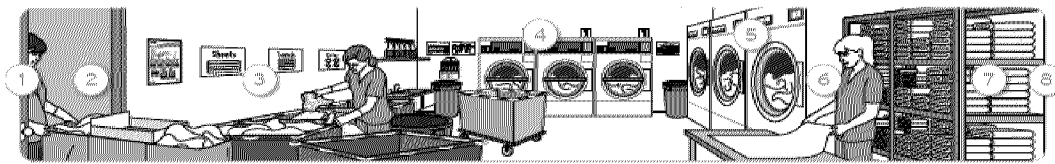
Invierta y deje secar al aire. No seque con un trapo.

TIP: Refill sink every two hours or as directed by local guidelines and/or packaging instructions.

CONSEJO: Vuelva a llenar el fregadero cada dos horas o de acuerdo a las directrices locales y/o a las instrucciones del envase.

Laundry Training Guide

Guía de Entrenamiento de Lavandería



COLLECTION RECOLECCIÓN



Separate stained linens into collection bags or by tying linens to enable Laundry Operator to identify soiled linen.

Separar a ropa de cama manchada en bolsas de recolección o atándolos para permitir que el operador de lavandería identifique a ropa de cama manchada.

TRANSPORT TRANSPORTE



Soiled linens should be transported in cart without being overfilled.

La ropa de cama sucia se debe transportar en un carro sin cargarlo en exceso.

SORTING CLASIFICACIÓN



Sort by linen type to select proper wash formula. Separate stained linen for pre-treatment.

Ordenar según el tipo de ropa de cama para seleccionar el método de lavado adecuado. Separar a ropa de cama manchada para el pre-tratamiento.

WASHING LAVADO



Load washer at recommended weight to maximize cleaning results. Select proper formula as washer or controller.

Cargar a lavadora hasta el peso recomendado para maximizar los resultados de limpieza. Seleccionar la fórmula correcta en la lavadora o controlador.

STAIN MANAGEMENT TRATAMIENTO DE MANCHAS

Stains are the #1 cause of linen replacement. StainBlaster is formulated to eliminate tough stains, extending linen life while reducing waste, water & energy and overall costs.

Las manchas son la principal causa del reemplazo de la ropa de cama. StainBlaster™ está formulado para eliminar manchas difíciles, lo que prolonga la vida útil de la ropa de cama, mientras reduce los residuos, el agua y la energía, y los costos totales.

Spray StainBlaster™ Pre-Spotter product directly on stained area of linen.

Rociar el quitamanchas para prelavado StainBlaster™ directamente en el área manchada de la ropa de cama.

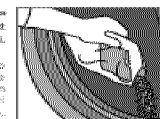
PRE-TREAT TRATAMIENTO PREVIO



Pour StainBlaster™ Reclaim product directly into wash wheel.

Verter el producto StainBlaster™ de recuperación directamente en el tambor de la lavadora.

RECLAIM RECUPERACIÓN



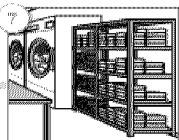
USE USE



Move laundry to cart taking care not to overload cart. In guest room, place laundry on clean, hard surface while replacing linens in room.

Mover a ropa en el carro, sin sobrecargarlo. En la habitación de huéspedes, colocar la ropa sobre una superficie dura y limpia, mientras cambia a ropa de cama en la habitación.

STORE ALMACENE



Stack folded laundry neatly in appropriate location, taking care to place older laundry in most accessible position.

Apartar a ropa plegada de manera limpia en un lugar adecuado, procurando colocar a ropa anterior en un lugar más accesible.

FOLD DOBLE



Fold linen immediately to avoid wrinkles. Inspect linens carefully for stains and separate stained linen for reclaim.

Doblar a ropa de cama inmediatamente para evitar arrugas. Inspeccionar a ropa de cama con cuidado para detectar manchas y separar a ropa manchada para recuperación.

DRYING SECADO

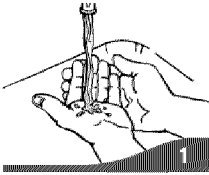


Separate stained linen for reclaim. Select proper dryer settings by linen type to reduce wrinkles & static.

Separar a ropa manchada para recuperación. Seleccionar la configuración de secado adecuada según el tipo de ropa de cama para reducir las arrugas y la estática.

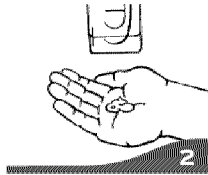
Proper Hand-Washing

PROCEDIMIENTOS DE LAVADO DE MANOS



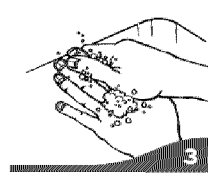
Wet your hands with hot, running water (at least 100°F/38°C).

Mójese las manos con agua corriente caliente (al menos, a 100°F/38 °C).



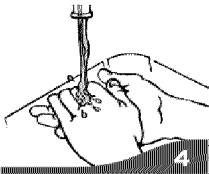
Apply soap.

Aplíquese el jabón.



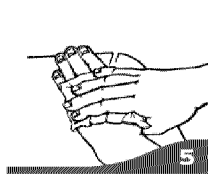
Scrub hands and arms for at least 20 seconds. Clean under fingernails and between fingers.

Lávese las manos y los brazos por lo menos veinte (20) segundos. Lávese debajo de las uñas y entre los dedos.



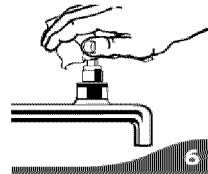
Rinse thoroughly under running water.

Enjuáguese las manos completamente con el agua corriente.



Dry hands and arms with a single-use paper towel.

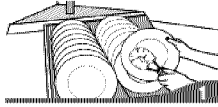
Séquese las manos y los antebrazos con una toalla de papel descartable.



Turn off faucet using paper towel.

Cierre el grifo con la toalla de papel.

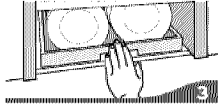
WASHING LAVADO



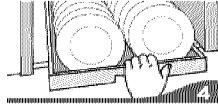
Hand scrape and rack dishes.
 Raspe a mano y coloque la vajilla en bastidores.



Pre-rinse dishes.
 Preenjuague la vajilla.



Open door, place rack into machine and close the door.
 Abra la puerta, coloque el bastidor en la máquina y cierre la puerta.



Remove the rack after cycle and allow drying.
 Extraiga el bastidor después del ciclo y permítalo secar.



Dump and fill wash tank with fresh water on a regular basis to control soil.
 Vacíe y llene el tanque de lavado con agua limpia a intervalos regulares para controlar la suciedad.